# REMARKS

GENERALLY

A current and Final Office Action is dated 06/27/2006. The current Office Action examined claims 1-13 and 19-35. Claims 1-13 and 19-35 were rejected.

This current Reply is responsive to the current Office Action. In this current Reply, no claims are canceled or added. Hence, claims 1-13 and 19-35 continue to be pending and presented for examination.

## RESPONSE TO CLAIM REJECTIONS UNDER 35 U.S.C. § 112, SECOND PARAGRAPH

As explained below, it is respectfully submitted that there are no remaining 35 U.S.C. §112, second paragraph, issues. Accordingly, withdrawal of the instituted §112, second paragraph, rejections is hereby respectfully requested.

This Response adheres to the numbering in the current Office Action. Under § 112, the rejections are numbered (i)-(v) at pages 2-3 of the current Office Action.

The current Office Action reads on Page 2, at item (i):

> i. "mouse clicking, mouse moving, fast forward, fast backward, object zoom-in, object zoom-out, add or delete", claim 7, lines 2-4, claim 20, lines 2-3, claim 33, lines 2-3, claim 34, lines 2-3 and claim 35, lines 2-3. It is unclear how "mouse clicking, etc." is related to the method claimed, if mouse clicking on the content information, or if mouse clicking different content information from other session, and how "mouse clicking" affecting the method claimed, if mouse clicking is requesting additional content information;

It is respectfully submitted that these claim elements are clear when read in light of the Specification. Support for these claim elements may be found, for example, in the Written Description at Page 14, Line 20 to Page 15, Line 3; at Page 15, Lines 18-20; at Page 16, Lines 4-6; at Page 18, Lines 13-16; at Page 19, Lines 7-14; at Page 19, Line 19 to Page 20, Line 2; and so forth.

The current Office Action reads on Page 3, at item (ii):

> ii. "one prioritizing parameter associated with a monitored performance of the network", claim 8, Line 4. It is unclear if the prioritizing parameter here is the same or related to the ones before, and if the performance is monitored by the

"a user" as in claim 6, or by a third entity contributing to the prioritizing parameters;

It is respectfully submitted that these claims are clear as follows. With regard to claim 6, it may be parsed as: generating resource coordination information based at least in part (i) on at least one prioritizing parameter associated with an application communicating the content information and (ii) on one or more prioritizing parameters associated with a user interaction via a remote device that is operatively coupled to a network. Hence, the resource coordination information in claim 6 is based at least in part on two different prioritizing parameters (i) and (ii).

With regard to claim 8, it may be parsed as: generating resource coordination information based at least in part (i) on at least one prioritizing parameter associated with an application communicating the content information and (ii) on one or more prioritizing parameters associated with a user interaction via a remote device that is operatively coupled to a network [...] (iii) on at least one prioritizing parameter associated with a monitored performance of the network. Hence, the resource coordination information in claim 8 is based at least in part on three different prioritizing parameters (i), (ii), and (iii).

The current Office Action reads on Page 3, at item (iii):

> iii. "collaborator logic...the user interaction", claim 19, lines 4-11. The collaborator logic receives two prioritizing parameters, the first is associated with application communicating the content information and the second is associated with a user interaction. The collaborator logic is operatively coupled with a packetizer logic from one side and a priority mapping logic from another side. First, it is unclear if the first prioritizing parameter is outputted with the packets of content information received from the packetizer logic.

Applicants' representative is uncertain as to the failure of clarity being alleged by the Office in the above paragraph. It is respectfully submitted that claim 19 is clear. However, claim 19 has been non-substantively amended as indicated above to increase its clarity.

Moreover, the following is a reproduction of claim 19 with element numbers from Fig. 4 inserted to provide additional explanation. These inserted element numbers are included by way of example only:

> packetizer logic (408) configured to receive encoded content information and output corresponding packets of content information;
>
> collaborator logic (432) operatively coupled to the packetizer logic and configured to receive at least one prioritizing parameter associated with at least one application [from (426)], including an application communicating the content information, and one or more prioritizing parameters associated with a user interaction via a remote device that is operatively coupled to a network [from (428)]; the collaborator logic further configured to output resource coordination information based at least in part on the at least one prioritizing parameter associated with the application and the one or more prioritizing parameters associated with the user interaction;
>
> priority mapping logic (422) operatively coupled to the collaborator logic to receive the resource coordination information and operatively coupled to the packetizer logic to receive the packetized content information, the priority mapping logic configured to selectively associate each received packet of content information with a service class selected from among at least two different service classes based on the resource coordination information, and to selectively output at least one packet of content information based on a priority associated with each service class; and
>
> forwarder logic (424) operatively coupled to the priority mapping logic and configurable to provide the at least one packet of content information to the network.

The current Office Action reads on Page 3, at item (iv):

> iv. "one prioritizing parameter associated with the network performance", claim 21, lines 4-5. It is unclear how this is related to "one or more prioritizing parameters associated with a user interaction", claim 19, line 7, are they the same parameters, is the user interacting through the network monitoring logic, or the user and the network monitoring logic are different and feeding different prioritizing parameters;

It is respectfully submitted that claim 21 is clear. The Office's attention is directed to the explanation above for claims 6 and 8. In other words, the resource coordination information in claim 21 is output based at least in part on three prioritizing parameters: (i) on the at least one prioritizing parameter associated with the application, (ii) on one or more prioritizing parameters associated with the user interaction, and (iii) on the at least one prioritizing parameter associated with the network performance.

The current Office Action reads on Page 3, at item (v) [apparently a typo as "i."]:

> i. "selectively aggregate content information", claim 25, line 12. It is unclear what are the components of the content information that is aggregated, why the content information need to be aggregated, and on what basis the content information is being aggregated, in order to understand the meaning of "selectively".

It is respectfully submitted that claim 25 is clear. However, to expedite prosecution and to enable the examination to focus on substantive patentability issues, claim 25 has been non-substantively amended by deleting the allegedly unclear term "selectively".

As explained above, it is respectfully submitted that there are no remaining 35 U.S.C. §112, second paragraph, issues. Accordingly, withdrawal of the instituted §112, second paragraph, rejections is hereby respectfully requested.

RESPONSE TO CLAIM REJECTIONS UNDER 35 U.S.C. §§ 102 AND 103

As explained further below, it is respectfully submitted that all pending claims are patentable. In short, even assuming, *arguendo*, that the art of record teaches compression based on feedback from a client device, none of the art of record teaches responding to interaction from a *user* of the client device.

Generally, the current Office Action rejected all pending claims 1-13 and 19-35.

Specifically, the current Office Action rejected the claims as follows:

> 5. Claims 1-13 and 19-35 are rejected under 35 U.S.C. 102(e)/103(a) as being anticipated by/unpatentable over Aharoni et al. (US 6,014,694), hereafter "'Aharoni".
>
> 28. Claim 1 is further rejected under 3 5 U.S.C. 102(e)/103(a) as being anticipated by/unpatentable over McCanne et al. (Receiver-driven Layered Multicast, ACM SIGCOMM'96, August 96), hereinafter "McCanne".
>
> 32. Claim 12 is further rejected under 3 5 U.S.C. 103 (a) as being unpatentable over McCanne in view of Borella et al. (US 6,587,433), hereinafter "Borella".
>
> 35. Claims 6, 19, and 25 are further rejected under 35 U.S.C. 102(e) as being anticipated by Gai et al. (US 6,651,101), herein after "'Gai'".

Moreover, the current Office Action traversed Applicants' remarks at page 16 as follows:

> 42. Aharoni discloses prioritization resulting from user interaction feedback (col. 7, line 60- to col. 8, line 17; and col. 19, lines 15-21) via a client device that is operatively coupled to a network (220, fig. 15). McCanne discloses compressed video objects (inherent in Page 3, left col., 2nd parag.) as affected by at least one user interaction via a remote device that is operatively coupled across a network (page 3, right col., parags 1 and 3). Gai discloses prioritizing parameters associated with a user interaction (col. 4, Lines 10-18, 37-38) via a remote device that is operatively coupled to a network (212, fig. 2; col. 8, lines 15-17; col. 7, lines 53-56).

With regard to the portions of the documents to which paragraph #42 of the current Office Action cites:

Aharoni et al. reads as follows:

> The sender functions to accept video frame data from the receiver and encapsulate the video data into packets for transmission of the network to the client. Each client that requests a connection to be established causes an instance of the sender to be created. Requests for multiple video sources from the same client cause additional instances of the sender to be created. The sender functions to assemble packets for transmission from the video source data input to the receiver. The packets are formed on the basis of the current choice for the level of video transmission quality. Based on bandwidth measurements, the sender determines the appropriate level of quality to transmit to the client to best match the available bandwidth. Assembled packets are sent to the network for delivery over the network connection to the video client(s).
>
> The sender also measures the available bandwidth of the network connection between the video server and the video client. As described in more detail, the sender utilizes the bandwidth measurements to determine the appropriate video quality level to send over the connection. If too low a video quality is chosen then network bandwidth is wasted and a better picture could be hand the client display. On the other hand, if too high a video level is chosen then too much data may become lost or computed which also causes the quality of the picture on the client display to suffer.

(Aharoni et al.; Column 7, Line 60 to Column 8, Line 17)

> [...] In addition, the video client 220 is adapted to issue the video file requests to the rate controller 222 rather than to any of the video servers 1 through N. Throughout the video transmission session, the video client 220 functions to return acknowledgments and statistics to the rate controller 222. The rate controller uses the acknowledgments and statistics returned by the video client 220 in order to calculate the optimum compression (resolution) level to use.

(Aharoni et al.; Column 19, Lines 15-21)

McCanne reads as follows:

> Instead of the best-effort, IP Multicast model described above, the universally cited approach to layered packet transmission adds a drop-preference packet discard policy to all the routers in the network. Under drop-preference, when congestion occurs, routers discard less important information (i.e., low-

priority packets) before more important information (i.e., high-priority packets). Although this approach provides graceful degradation in the presence of packet loss, we believe it has scaling problems because it rewards poorly-behaved users.

(McCanne; Page 3, Left Column, 2nd paragraph)

Figure 3 illustrates the RLM scheme. Suppose source $S$ is transmitting three layers of video to receivers $R_1$, $R_2$, and $R_3$. Because the $S/R_1$ path has high capacity, $R_1$ can successfully subscribe to all three layers and receive the highest quality signal. However, if either $R_2$ or $R_3$ try to subscribe to the third layer, the 512 kb/s link becomes congested and packets will be dropped. Both receivers react to this congestion by dropping layer three, prompting the network to prune the unwanted layer from the 512 kb/s link. Finally, because of the limited capacity of the 128 kb/s link, $R_3$ might have to drop back all the way to a single layer. The effect is that the distribution trees for each layer have been implicitly defined as a side effect of the receiver adaptation.

[...]

One source for this feedback might be to monitor link utilization and explicitly notify end-systems when capacity becomes available. However, this requires new mechanism in the network that renders deployment difficult. The approach we adopt in RLM is to carry out active experiments by spontaneously adding layers at "well chosen" times. We call this spontaneous subscription to the next layer in the hierarchy a *join-experiment*. If a join-experiment causes congestion, the receiver quickly drops the offending layer. If a join-experiment is successful (i.e., no congestion occurs), then the receiver is one step closer to the optimal operating point.

(McCanne; Page 3, Right Column, 1st and 3rd paragraphs)

Gai et al. reads as follows:

[...] Furthermore, the treatment that should be applied to these different traffic flows varies depending on the particular traffic flow at issue. For example, an online trading application may generate stock quote messages, stock transaction messages, transaction status messages, corporate financial information messages, print messages, data back-up messages, etc. A network administrator, moreover, may wish to have very different policies or service treatments applied to these various traffic flows. In particular, the network administrator may want a stock quote message to be given higher priority than a print transaction. [...]

[...]

Briefly, the invention relates to a method and apparatus for identifying specific traffic flows originating from a network entity and for applying predetermined policy or service treatments to those flows.

(Gai et al.; Column 4, Lines 10-18 and 37-38)

For example, assume end station 212 contacts program 224 and requests a stock quote for a particular equity (e.g., IBM common stock). Program 224 retrieves the requested information and prepares a message containing the requested stock quote for transmission to end station 212. [...]

> [...]
> Assume that application program 224 is a stock transaction program that can provide stock quotes to and process stock transactions from remote clients, such as end station 212. [...]

(Gai et al.; Column 8, Lines 15-17; Column 7, Lines 53-56)

With Aharoni et al., it appears that "the video client 220 functions to return acknowledgments and statistics to the rate controller 222" (Column 19, Lines 17-19). These actions are performed by the video client 220 as part of its hardwiring and/or programming.

None of the cited art as reproduced above, or any other art of record, teaches classifying or prioritizing information based on a *user interaction* at a remote/host device.

Accordingly, no art of record, either alone or in any combination, anticipates or renders obvious at least the following element(s) in conjunction with the other elements of their respective claims:

Claim 1: *classifying information within each elementary stream based on importance and responsive to the compressed video objects as affected by at least one user interaction via a remote device* that is operatively coupled across a network.

Claim 6: generating resource coordination information based at least in part on at least one prioritizing parameter associated with an application communicating the content information and on *one or more*

*prioritizing parameters associated with a user interaction via a remote device* that is operatively coupled to a network.

Claim 12: generating prioritization information based at least in part on at least one parameter associated with an application streaming media information and on *one or more prioritizing parameters associated with a user interaction via a remote device* that is operatively coupled to a network.

Claim 19: collaborator logic operatively coupled to the packetizer logic and configured to receive at least one prioritizing parameter associated with at least one application [...] and *one or more prioritizing parameters associated with a user interaction via a remote device* that is operatively coupled to a network; the collaborator logic further configured to output resource coordination information based at least in part on the at least one prioritizing parameter associated with the application and the *one or more prioritizing parameters associated with the user interaction.*

Claim 25: . . . the *second host device receiving a user interaction* [...] wherein the first application-aware resource controller is configured [...] to map the aggregated information to at least two service classes selected from a group of two or more different service classes based at least in part on *one or more prioritizing parameters associated with the user interaction.*

Reasons for the allowability of independent claims 1, 6, 12, 19, and 25 have been provided above. Claims 2-5/33, 7-11, 13/34, 20-24, and 26-32/35 depend from the independent claims 1, 6, 12, 19, and 25, respectively. Although each also includes additional element(s) militating toward allowability, it is respectfully submitted that these dependent claims are allowable at least for the reasons given above in connection with their respective independent claims.

## CONCLUSION

It is respectfully submitted that all of the pending claims 1-13 and 19-35 are allowable, and prompt action to that end is hereby requested.

If the Examiner discovers an issue or issues that may delay the immediate allowance of the instant Patent Application, the Examiner is respectfully requested to contact the undersigned attorney prior to issuing another Office Action.

Respectfully Submitted,

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